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ABSTRACT

Junior college students enrolled in vocational and technical programs constitute an important source of trained, skilled manpower for our expanding economy. This Research Review combines findings of recent studies about these students, and develops a tentative description of their background and characteristics. Comparisons with students at other institutions and in other programs of higher education are frequently drawn. To begin with, the typical environments from which these students are likely to come are described. The implications of such socioeconomic factors as differences in father's education and occupation level are then discussed. Next, ability levels and their relationship to program or type of institutional attendance are viewed. Comparisons of high school courses of study and academic self-perceptions follow, concluding with a look at the occupationally-oriented student's interests, goals, perceptions of educational aims, and motivations. (JO)

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OCCUPATIONALLY ORIENTED STUDENTS*

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For the past twenty years, this nation has been working toward an explicit goal of universal higher education. The concept has found ready acceptance by both political parties and by four American Presidents since Truman's Commission on Higher Education proclaimed in 1947 that "At least 49% of our population has the mental ability to complete fourteen years of schooling with a curriculum of general and vocational studies that should lead either to gainful employment or to further study at a more advanced level." In 1947, when only one-fourth of the 18- and 19-year-olds were in college, the proposal was heralded as a bold ideal. From our perspective now, it seems quite modest. We have already surpassed the goal they envisioned and, by 1980, two-thirds of the college-age youth will be in college. We are no longer concerned with whether students are ready for higher education, but rather with whether higher education is ready for them.

Not long ago, higher education addressed itself to a limited segment of the population. The academic model served reasonably well, and each level of education was judged by how well it prepared students for the next level. Past school grades were, and still are, the best predictors of future grades. Admissions tests did, and still do, an adequate job of predicting success in college, if success is defined along traditional academic lines. Our national commitment to universal post-secondary education, however, has brought us face-to-face with the reality that we must educate youth for life in a society where knowledge is exploding, semi-skilled and unskilled jobs are disappearing, and most of the population will have to run just to stay in place with the demands for new skills. In Venn's (1964) colorful words, technology has placed education "squarely between man and his work" (21).

Arising in part to counteract the technological society, but also dictating a broader base for higher education, is the move toward egalitarianism and equality of opportunity. Talcott Parsons, the noted Harvard sociologist, has observed that "The available evidence points to the conclusion that it is one's standing in school work which is the primary criterion of differentation between those who will and those who will not reach the higher levels of the educational system and, via that, of the occupational world" (15:246). If we are to offer full opportunity to those who are not especially successful in the present educational system, we must devise alternative pathways to success.

Traditional colleges will continue to play an important role, but they are far from fulfilling the needs of either society or of individuals. Their range of offerings and their cultivation of talent is too narrow to meet today's need for an educated citizenry. Community colleges, with their broad offerings and their open doors, represent higher education's concern for providing alternatives to the academic model, but old habits die hard and new images are not established overnight.

Occupational education in the community college has many strengths. Ostensibly, it can meet the new needs of society as well as the diverse needs of individuals, but it also has a past to overcome. Because of our narrow academic definition of higher education, occupational education has never been quite "academically respectable," nor have the young people in it been considered "talented." Occupational education has all too often been thought of in negative terms: i.e., students take occupational courses not because of what they can do, but because of what they can't do.

Certainly students in the occupational curricula of the community colleges today are an early taste of the demands that universal higher education will make on educational innovators. To give up the educational techniques that have not worked and to find new ones that will is the challenge, and it will take much better understanding than we now have of the characteristics of the student who is new to the ranks of higher education. Although the research is scanty, a synthesis of scattered bits of data may help to construct a tentative description of the characteristics of the occupationally-oriented student.

Although it simplifies things to speak of both students enrolled in the technical degree programs and those in the vocational non-degree curricula of the community college as occupationally-oriented, it should be noted that many of them say that they hope to transfer to a four-year college. This aspiration obtains not only for 85% of those pursuing a college-parallel course of study, but also for 43% in technical programs and for 21% of the vocational students (3). Most students who enter occupational curricula will not transfer to a four-year college, but a study of career graduates from four community colleges of the City University of New York found that three years after graduation, 44% of the students responding to the questionnaire were enrolled in or had completed a four-year college program (8). This figure is probably much above the national average, but it illustrates the potential role to be played by community colleges in the distribution of the nation's talent. The proportion of freshmen registered in the various curricula in one major study (3) is about 50% in the college-parallel, 27% in the technical programs, about 5% in the vocational courses, with the remaining 20% in general and developmental education and undesignated curricula.

In the forefront of present thinking about the characteristics of young people is the thesis that they are very much a product of their environments. Past experiences shape interests and attitudes and, to some extent, we believe, abilities and talents. Thus a research description might start with some data on the homes from which students come. Across all institutions of higher education exists a virtually unbroken and totally consistent hierarchy on socioeconomic and ability indices. The universities serve the richest and the most academically able students. Next

*Prepared for a two-day conference jointly sponsored by the American Educational Publishers Institute and the American Association of Junior Colleges on Occupational-Oriented Programs in Two-Year Colleges, in Miami, Florida, December 5, 1969.

in line are private liberal arts colleges, followed by public state colleges, followed by two-year colleges, followed by occupational and specialized schools. Figures from the American Council on Education study of some 240,000 freshmen in 350 colleges illustrate the point. Two-thirds of the students in private universities have fathers who have had some college education. At state colleges, the figure drops to about one-half and, for junior colleges, it is less than one-third (4:1-92). Within the public community colleges, the socioeconomic hierarchy continues, and data from the College Board's new Comparative Guidance and Placement Program show that only 20% of the technical and 15% of the vocational students come from homes where the father has had any college experience. In most cases, they are first-generation college students.

Closely related to the index of father's education is that of father's occupation. Whereas only a little over one-third of the college-parallel students in community colleges come from the homes of workers — skilled, semi-skilled, or unskilled — over half the vocational students do (3). A point of reference is provided by the statistic that roughly one-fifth of university freshmen are from the homes of workers (4:1-92). The point is that young people are exposed at home to different stimuli, different interests, and different reward systems. While the child of a doctor or lawyer or teacher feels quite at home with books and the emphasis on verbal learning that he finds in school, the child of a laborer or cook finds himself in a foreign culture. A child's ability to succeed in school is intricately interwoven with his family background. Although it is unadvisedly simplistic to maintain that poverty causes low ability or that low ability causes poverty, we do know that socioeconomic status and academic ability are related, and that both influence who goes to college, where he goes, what his major is, and how long he stays.

Project TALENT, a 20-year longitudinal study of nearly half a million students as they progress through the educational system, found that indices of socioeconomic level, such as the presence of television and radio in the home, the number of books owned by the family, and the student's access to a room, desk, and typewriter of his own were significantly related to measures of ability—especially to tests of information and reading comprehension (10). Keeping in mind the interaction of environment and ability, it is still possible to look at the effects of each on college attendance. Chances for senior college are poor for those who fall in the lowest quarter on either ability or socioeconomic level. The majority of low-ability (bottom quarter) students do not go to college regardless of how privileged they are socioeconomically and the majority of low socioeconomic level (bottom quarter) students do not go to college no matter how able. However, high ability is more likely to compensate for low socioeconomic status than vice versa. Specifically, a high-ability (top quarter) male from a below-average socioeconomic background is almost twice as likely to enter college as a low-ability (bottom quarter) male of above average socioeconomic status (16).

It is quite clear from the research that the average academic ability of two-year college students is lower than that for four-year college students (6). The community colleges are democratizing higher education as they move rapidly toward representing ability in the population at large (7). Freshmen in community colleges are very like high school seniors in tested ability except that community college classes tend to have more students in the middle ranges of ability, with fewer very low- or very high-ability students (9). Low-ability high school graduates do not continue their education, and high-ability graduates are more likely to enter four-year colleges. Ability differences between occupational and transfer students within community colleges are mixed, attributable primarily to sex differences. There appears to be general agreement in research studies that men in occupational curricula score significantly lower on tests of academic ability than men in the college-parallel program (1; 3; 11; 12; 14). For women, there seems to be little difference between college-parallel and occupational groups (1; 14). The CGP scores on ten tests of academic ability show women in the health programs to be especially able, scoring above the liberal arts women on many measures. There is also evidence that more women of moderate ability enter the occupational curricula, whereas occupational men tend to be concentrated at the low-ability levels. In fact, one study showed that occupational men scored lower on measures of academic ability than the high school classes from which they came (11). Since women of low ability are much less likely than men of the same ability and socioeconomic level to continue their education beyond high school (5), it is understandable that marginal-ability men would enter occupational curricula, while marginal-ability women enter the labor market after high school graduation.

Occupational students in general are much more likely than the average high school senior to have taken an occupational course of study in high school, and the high school course of study is a major difference between transfer and occupational students within the community colleges (1; 11). It is not clear whether their lack of experience with academic subject matter leads to low test scores or whether lack of academic success leads to choice of occupational programs. The fact remains, however, that, for many, the choice of an occupational course of study is determined between the ages of fourteen and eighteen, if not far earlier.

It is hard to say whether most students now registered in occupational curricula would have taken that course had other alternatives been open to them. In California, students who do not graduate in the upper one-third of their high school class are not eligible for the state colleges and the universities—and the students seem to accept this exclusion. About two-fifths of the occupational students from twenty California community colleges said they felt they would have no chance or only a slight chance of success at a state college, and nearly three-fourths thought that they would have little chance of success in the university system. Most wish, however, that they had "studied harder in high school," and that they had "taken high school more seriously" (18). Whatever the reasons — an intellectually sterile home environment, low ability, earlier frustrating school experiences, or interests directed in other areas—many occupationally-oriented students in our present educational system recognize that they are not successful in the academic pursuits on which our society places such great (probably undue) value. Needless to say, this self-concept is not conducive to self-fulfillment, and community colleges (and everyone who influences the education program offered there) face a tremendous challenge in capitalizing on strengths of ability and interest and motivation.

Despite a high dropout rate—60% of the entrants to two-year occupational programs in one California study (11)—occupational students appear optimistic about their futures. Three-fourths of them are quite certain that they will continue in the field they are studying, and an even larger percentage feel that they have a fair or a very good chance of success in the occupational program of their junior college (18). There is also positive evidence that they are interested in their choice of field for study. On twelve interest scales used in the CGP battery, the scores of students were obviously related to their field of study. Science and pre-engineering students in both the college-parallel and the occupational curricula scored high on interest in math, physical science, and engineering technology. Students in the health-related fields scored high on health, biology, and, perhaps because so many are women, on home economics. Students registered in business programs scored high on measures of business and secretarial interest. Liberal arts students scored above the overall average on interest in social science, but their interests in other areas tended to parallel men's interests and women's interests more than specific field interests (3).

The interest of occupationally-oriented students in concrete and tangible goals is consistent with the research that finds lower socioeconomic groups concerned with security, immediate impulse expression, and concrete rewards, whereas higher socioeconomic groups are more likely to seek goals of status, achievement, and social re-

spectability. These different value systems show some consistency of interest, attitude, and personality across the few research studies of junior college students that have been done in this terribly important area (1; 2; 13; 17: 46-52; 19; 20). Generally speaking, researchers characterize two-year college students as little interested in abstract thinking or in originality and as prone to be more conventional and rigid than students beginning their education in four-year institutions.

In the CGP data (1968), occupational students were twice as likely as the college-parallel group to see the object of education as mostly or entirely job training; the great majority of them said that, in their freshman courses, they planned to concentrate mainly on learning things that would be useful to them in their future work. Happily, the College Satisfaction Scale of the CGP showed the vocational students most likely to feel that their community college courses did relate to their future plans, and they were also more inclined than the average student to feel that they would be happy in the work for which they were preparing. The New York City study showed that 80% of the employed graduates of career programs were in jobs directly related to their community college training (8).

The responses that occupationally-oriented students give on questionnaires present a picture of young people who know what they want and are pursuing an obvious pathway to their goal. This may be more artifact than fact, however, since it is easier for a liberal arts student than for one taking auto mechanics to express vague career goals and to accept more traditional general education as reasonable preparation for his immediate future. With the exception of wanting help in finding a job, occupational students express no more desire for counseling or guidance or tutoring than other community college students. In fact, they are less likely to indicate that they want help regarding educational and vocational plans than are transfer students (3). While there are no major differences between curricular groups in their desire for assistance, it should be pointed out that community college students as a group are receptive and eager for counseling assistance (6). Over half the students in each curricular gro CGP program expressed a desire for help with study techniques, and educational and vocational

Although there is a dearth of solid, comparative studies on the motivations and values of occup oriented students, evidence indicates that the occ student is more likely to be motivated by extrinsic while the more academically-oriented student find satisfaction in intrinsic rewards. For example, occ students are more likely to place value on grades and on money in jobs than the academic students more prone to value learning for its own sake an opportunity to be creative in a job. Apparently al seek the approval of their associates and, for th the reward systems may be undergoing some changes in the recent social upheavals. Traditio lower classes have not shown much interest service occupations. Now, however, we are beg see able young people turning their backs on the and tangible rewards that they are supposed t order to return to the ghetto to do social work it is not easy to find immediate gratification, cor amples of progress, or tangible financial reward so-called helping professions become highly value the peers of occupational students, it may wel we will find the high academic saturation that exists in social work is not an important aspe ability to do the job, and that occupational co lose their identification with the concept of man It boils down to what we have known for a motivation is the key to learning and that greatly from culture to culture and from decade t It is for this reason that a thorough understandi attitudes, backgrounds, and interests of studen important. Fortunately, although the students arrive ahead of their data, the capacity and soph of educational research are making tremendous There is considerable cause for optimism regar ability of research to aid in the understanding of and, through this, in the improvement in ed programs.

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